

Page 21, lines 8-11, replace the original paragraph with the following new paragraph:

The aforementioned precursors of the present invention provide Ta source reagents that have beneficial volatility characteristics for applications such as chemical vapor deposition, and are easily and economically synthesized. The Ta source reagents of the invention utilize molecular geometries that are controlled by subtle steric effects.

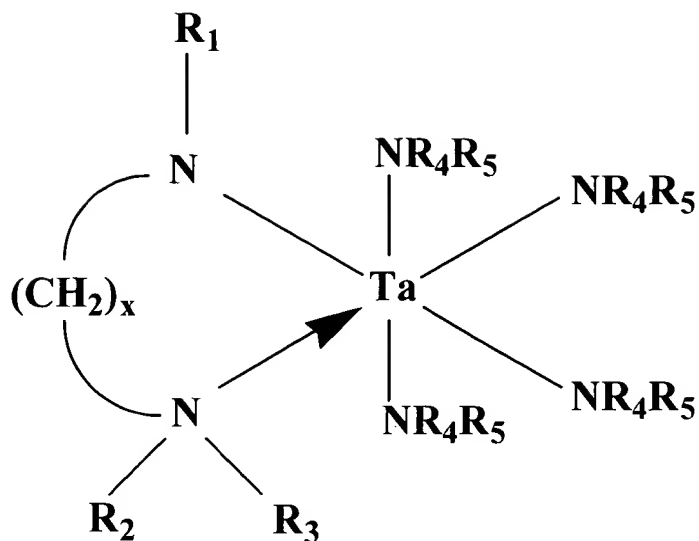
In the Claims²

Amend claims 5 and 6, to read as follows:

5. (Amended) A method of forming Ta or Ti material on a substrate from a precursor, comprising vaporizing said precursor to form a precursor vapor, and contacting the precursor vapor with the substrate to form said Ta or Ti material thereon, wherein the precursor comprises at least one tantalum and/or titanium species selected from the group consisting of:

- (i) tethered amine tantalum complexes of the formula:

² A marked-up version of the amended claims 5 and 6 is set forth in Appendix B, consistent with the requirements of 37 CFR § 1.121.



wherein:

x is 2 or 3;

each of R_1 - R_5 is independently selected from the group consisting of H, C_1 - C_4 alkyl, aryl, C_1 - C_6 perfluoroalkyl and trimethylsilyl;

(ii) β -diimines of the formula:



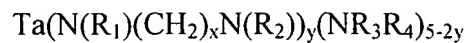
wherein:

G is a β -diimino ligand;

each Q is selected from the group consisting of H, C_1 - C_6 alkyl, aryl and C_1 - C_6 perfluoroalkyl; and

x is an integer from 1 to 4 inclusive;

(iii) tantalum diamide complexes of the formula



wherein:

x is the integer 1 or 2;

y is the integer 1 or 2;

each of R_1 - R_4 is independently selected from the group consisting of H, C_1 - C_4 alkyl, aryl, perfluoroalkyl, and trimethylsilyl;

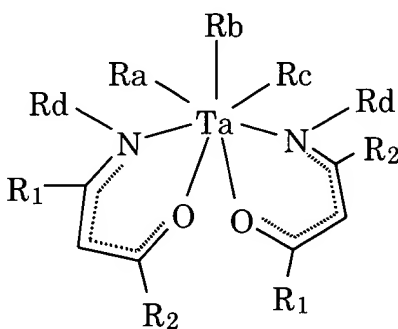
(iv) tantalum amide compounds of the formula



wherein each R and R' is independently selected from the group consisting of H, C_1 - C_4 alkyl, phenyl, perfluoroalkyl, and trimethylsilyl, subject to the proviso that in each

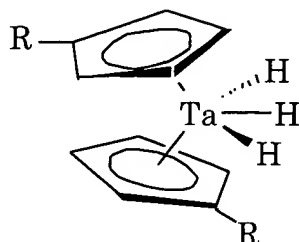
NRR' group, $\text{R} \neq \text{R}'$;

(v) β -ketoimines of the formula



wherein each of R_1 , R_2 , R_a , R_b , R_c and R_d is independently selected from H, aryl, C_1 - C_6 alkyl, and C_1 - C_6 perfluoroalkyl; and

(vi) tantalum cyclopentadienyl compounds of the formula



wherein each R is trimethylsilyl;

(vii) $\text{Ta}(\text{NR}_1\text{R}_2)_x(\text{NR}_3\text{R}_4)_{5-x} / \text{Ti}(\text{NR}_1\text{R}_2)_y(\text{NR}_3\text{R}_4)_{4-y}$

wherein each of R_1 , R_2 , R_3 and R_4 are independently selected from the group consisting of H, C_1 - C_8 alkyl, aryl, C_1 - C_8 perfluoroalkyl or a silicon-containing group selected from the group consisting of silane, alkylsilane, perfluoroalkylsilyl, triarylsilane and alkylsilylsilane, wherein x is an integer from 1 to 5 inclusive; and y is an integer from 1 to 4 inclusive;

(viii) $\text{Ta}(\text{NR}_1)(\text{NR}_2\text{R}_3)_3$

wherein each of R_1 , R_2 , and R_3 are independently selected from the group consisting of H, C_1 - C_8 alkyl, aryl, C_1 - C_8 perfluoroalkyl or a silicon-containing group selected from the group consisting of silane, alkylsilane, perfluoroalkylsilyl, triarylsilane and alkylsilylsilane, with the proviso that $\text{R}_1 \neq \text{Et}$ and $\text{R}_2 \neq \text{R}_3 = \text{Et}$;
 C₃-C₅ alkyl groups when R₂=R₃=Et

(ix) $\text{Ta}(\text{SiR}_1\text{R}_2\text{R}_3)_x(\text{NR}_4\text{R}_5)_{5-x} / \text{Ti}(\text{SiR}_1\text{R}_2\text{R}_3)_y(\text{NR}_4\text{R}_5)_{4-y}$